

REMARKS

Claims 1-121 are now pending in the application. Claims 1, 13-14, 18, 22, 24, 31, 37, 49-50, 54, 58, 60, 67, 73, 80, 87, 102-105, 107-101, 110, 112 and 114-115 are amended; and Claims 12, 32, 48, 68, 81, 95, 106 and 113 are cancelled. Amendments to the Claims are fully supported by the Claims and Detailed Description as filed, and therefore no new matter has been added. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

DRAWINGS

The drawings stand objected to for certain informalities relating to claim features, namely, first and second wireless circuits, as in, for example, Claim 7.

In Claim 107, a wireless station is recited that includes first and second “wireless” circuits. The term “wireless circuits,” as intended by Applicant, is meant as any circuit of a wireless device. For example, as shown in an exemplary embodiment in FIG. 2 of the present Application, a wireless network communications device 48 includes a plurality of circuits, including, but not limited to, a baseband processor (BBP) 62 and a radio frequency (RF) transceiver 52. The BBP 62 and the RF transceiver 52 are “wireless” circuits by virtue of being circuits of a wireless device (i.e. “wireless circuits” refers to “circuits in a wireless device”).

Applicant therefore believes that first and second wireless circuits are shown in the drawings because, for example, the drawings show a BBP 62, which may be a first wireless circuit, and a RF transceiver 52, which may be a second wireless circuit.

Applicant therefore believes that the objection the drawings has been overcome for at least this reason.

REJECTION UNDER 35 U.S.C. § 112

Claims 106, 107, 108, 113, 114 115, 119, 120 and 121 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement by including first and second wireless circuits. This rejection is respectfully traversed.

As best understood by Applicant, the Examiner alleges that first and second wireless circuits were not described in the specification to reasonably convey to one skilled in the art that the Applicant had possession of the claimed invention. The Examiner also alleges that the first and second wireless circuits are not supported in the specification.

Applicant disagrees. With respect to Claim 107, a wireless station is recited that includes first and second “wireless” circuits. The term “wireless circuits,” as intended by Applicant, is meant as any circuit of a wireless device. For example, as shown in an exemplary embodiment in FIG. 2 of the present Application, a wireless network communications device 48 includes a plurality of circuits, including, but not limited to, a baseband processor (BBP) 62 and a radio frequency (RF) transceiver 52. The BBP 62 and the RF transceiver 52 are “wireless” circuits by virtue of being circuits of a wireless device (i.e. “wireless circuits” refers to “circuits in a wireless device”). In other words, each of the plurality of circuits of the wireless device 48 are properly called wireless circuits because they are circuits in a wireless device.

One skilled in the art reading claim 107 would understand that the wireless circuits

referred to in the claim refer to, for example, the circuits of the wireless device 48 as shown in FIG. 2. Applicant notes that one of the wireless circuits may include, for example, the RF transceiver 52. Here again, the RF transceiver 52 communicates wirelessly. Similarly, while other circuits in the wireless device 48 do not directly transmit and/or receive wirelessly, the circuits are at least indirectly involved in wireless communication by virtue of being circuits of the wireless device 48 (e.g. the BBP 62). Applicant respectfully submits that any person skilled in the art would understand that the first and second wireless circuits, which are recited as being comprised in the wireless station, refer to circuits of the wireless device 48 such as the RF transceiver 52 and the BBP 62.

In view of the foregoing, Applicant respectfully submits that claims 107, 108, 113, 114, 115, 119, 120 and 121 are sufficiently supported in the specification so as to reasonably convey to one skilled in the art that Applicant had possession of the claimed invention.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-4, 7-10, 19-21, 37-40, 43-45, 46, 55-57, 73-76, 79-82, 84-86, 102 and 109 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen et al. (U.S. Pub. No. 2004/0253996A1) in view of Karaoguz (U.S. Pub. No. 2004/0029620A1).

Claims 5, 6, 8, 23-27, 29, 30-36, 42, 59-63, 64, 65-69, 70-72, 77, 78, 88-90, 91-96, and 97-99, stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen et al. in view of Mahany et al. (U.S. Pub. No. 2006/0280140A9) further in view of Karaoguz.

Claim 52 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen et al. in view of Karaoguz, further in view of Karaoguz et al. (U.S. Pub. No. 2004/0029621A1).

Claims 11 and 47 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen et al. in view of Karaoguz, further in view of Jokinen (U.S. Pub. No. 005774813A).

Claims 12, 14, 18, 48, 50 and 54 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen et al. in view of Karaoguz, further in view of Jokinen and Hawkins et al. (U.S. Pub. No. 005586308A).

Claims 13, 15, 17, 49, 51 and 53 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen et al. in view of Karaoguz, further in view of Jokinen, Hawkins et al. and Devries et al. (U.S. Pub. No. 006873215B2).

Claims 15 and 51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen et al. in view of Karaoguz, further in view of Jokinen, Hawkins et al. and Devries et al., and Norman et al. (U.S. Pub. No. 006178332B1).

Claims 103, 110 and 116 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen et al. in view of Karaoguz, further in view of Gardner et al. (U.S. Pub. No. 005950120A).

Claims 104, 111 and 117 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen et al. in view of Karaoguz, further in view of Jokinen.

Claims 105, 112, and 118 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen et al. in view of Karaoguz, further in view of Gardner et al. and Jokinen.

Claims 106, 107, 108, 113, 114, 115, 119, 120 and 121 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen et al. in view of Karaoguz, further in view of Gardner et al. and Jokinen and Khlal et al. (U.S. Pub. No. 007046977B2). These rejections are respectfully traversed.

With respect to Claim 1, Applicant has amended Claim 1 to include elements of Claim 12, and therefore the rejection corresponding to Claim 12 will be discussed regarding Claim 1. Claim 12 was rejected over Chen, Karaoguz, Hawkins and Jokinen, although the Examiner did not discuss sections of Jokinen that correspond to elements of Claim 1. Chen, Karaoguz, Jokinen and Hawkins do not at least show, teach or suggest a crystal oscillator that is selectively controlled by a MAC so that it outputs a timing signal to first and second phase locked loops (PLLs) during an active mode. The PLLs generate clock signals that clock a base band processor (BBP) and a RF transceiver, respectively.

As best understood by Applicant, Chen includes a point coordinator that may set up a timeslot schedule that is sent to stations of a WLAN. The stations transmit/receive data during their timeslots by slipping into predetermined active or power-saving states. As recognized by the Examiner, the point coordinator is not a MAC and does not selectively control a crystal oscillator during an active mode of any of the stations. The MAC of Claim 1 may send signals to the BBP and RF transceiver to enter high/low power modes (as does the MAC in, for example, Claim 14), but the MAC of Claim 1 also controls clocking operations through controlling the crystal oscillator during those high/low power modes.

As best understood by Applicant, the Examiner asserts that Karaoguz includes a MAC and an oscillator module that are powered up/down by a power control device. The MAC of Karaoguz does not control the oscillator module.

As best understood by Applicant, the Examiner asserts that Hawkins includes a crystal oscillator that outputs a timing signal to a plurality of PLLs to clock various subsystems. As best understood by Applicant, Hawkins does not describe a MAC or show, teach or suggest that a MAC selectively controls the crystal oscillator. Instead, Hawkins merely includes a personal information device (PID) that includes multiple PLLs that receive clock signals from an oscillator. Therefore, Hawkins, as was the case with Chen and Karaoguz, also lacks the MAC control of a crystal oscillator, as in Claim 1.

It is a longstanding rule that to establish a prima facie case of obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 USPQ 143 (CCPA 1974), see MPEP §2143.03. Claim 1 is therefore believed to be allowable for at least the above reasons.

Further, Applicant respectfully submits that the combination of Chen, Karaoguz, Jokinen and Hawkins is improper. For example, the Examiner alleges that “it would have been obvious to one of ordinary skill in the art” to assemble the combination as in Claim 1 “to provide improved power management control in wireless device(s).”

This brief explanation falls far short of the type of **explicit analysis** that is required by the Supreme Court in *KSR Int’l v. Teleflex Inc.*, 550 U.S. ____ (2007). Absent such an express teaching or suggestion in the references, the explicit analysis and reasoning must be supplied by the Examiner. *Id.* In other words, the Examiner is

required to provide explicit reasoning as to why one skilled in the art would be motivated to construct the power management method using MAC control of a crystal oscillator. Here, the Examiner merely notes that “it would have been obvious to one having ordinary skill in the art at the time the invention was made” to “modify the device as claimed with the power management method using crystal oscillators” and fails to provide explicit analysis and reasoning as required.

For example, Chen discloses WLAN stations that slip into active or power-saving states in response to a schedule from a point coordinator. The Examiner relies on the point coordinator to disclose Applicant’s WLAN station control. In other words, Chen relates specifically to WLAN systems. Further, Karaoguz discloses a MAC and an oscillator of a network system and that are powered up/down by a common controller. Here, the Examiner relies on the MAC and oscillator to show Applicant’s oscillator control. In other words, Karaoguz relates specifically to network devices. The Examiner did not expressly use Jokinen to show elements that are in Claim 1.

In contrast, the Examiner relies on Hawkins to teach a crystal oscillator that outputs timing signals to PLLs that control various devices. Hawkins, however, is directed to control of personal information devices (PIDs) and does not relate to WLANs. The Examiner relies on each of a point coordinator in a WLAN (Chen), a power control device for a MAC and an oscillator of a network system (Karaoguz) and an oscillator timing signals for multiple PLLs in a PID (Hawkins) to disclose Applicant’s wireless station. As such, Applicant respectfully submits that there is no suggestion to combine the teachings of Chen, Karaoguz, Jokinen and Hawkins. More specifically, there is no motivation or suggestion to combine Chen, which is directed to a WLAN

system, with Karaoguz, which is directed to a network system and Hawkins, which is directed to a PID.

Therefore, Claim 1 is allowable for at least these reasons. Claims 37, 102 and 109 are allowable for at least similar reasons as Claim 1. Claims 2-11, 13-21, 38-47, 49-57, 103-108, 110-112 and 114-115 ultimately depend from Claims 1, 37, 102 and 109 and are allowable for at least similar reasons.

Further, with respect to Claim 22, Applicant has amended Claim 22 to include elements of Claim 32, and therefore the rejection corresponding to Claim 32, which originally depended from Claim 22, will be discussed regarding the amended Claim 22.

As best understood by Applicant, Claim 32 is rejected over Chen, Mahany and Karaoguz because the references allegedly disclosed the system of Claim 22 and because Chen allegedly includes time slot control "after prior assigned time slots are valid for prior beacon interval" as in Claim 32. Claim 32 also included various different time slot control operations that the Examiner did not assert where shown, taught or suggested by Chen, Mahany and Karaoguz.

Therefore Applicant amended Claim 22 to include elements not found by the Examiner to be in Chen, Mahany and Karaoguz. In other words, as best understood by Applicant, Chen, Mahany and Karaoguz do not show, teach or suggest at least a predetermined time slot for a WLAN station that occurs after one of several system operations, as in the amended Claim 22. The system operations include the following: a wireless LAN station with a prior time slot transmits a null frame, a wireless LAN station with the prior time slot transmits a frame with a predetermined sequence

number, and a wireless LAN station with the prior time slot transmits a frame with a predetermined duration value.


Therefore, Claim 22 is allowable for at least these reasons. Claims 5, 73 and 87 are allowable for at least similar reasons as Claim 22. Claims 23-31, 33-36, 59-67, 69-72, 74-80, 82-86, 88-94, 96-101 and 116 -121 ultimately depend from Claims 22, 58, 73 and 87 and are allowable for at least similar reasons.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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